

## “THE MANAGEMENT OF INDRALUPTA WITH JAYAPAL BEEJA LEPA FOLLOWING JALAUKA AVACHARANA ”

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### ABSTRACT

Hair loss (*Indralupta*) is one of the most common problems faced by people, the reason being today's lifestyle. Research work on *Indralupta* by using drugs like *Gunja*, *Maricha* etc. have been conducted, but no work has been done by using the drug regimen *Jayapal beeja lepa* following *Jalauka Avacharana*. Hence the topic of research is selected. 30 diagnosed patients of *Indralupta* as per Criteria for Inclusion were included in the study after screening on OPD level. The enrolled patients were allotted by lottery method into two groups- Control and Trial group each having 15 patients. The clinical trials were conducted at Bharati Vidyapeeth Medical Foundation's Ayurved Hospital Dhankawadi, Katraj, Pune. Patients of Control group were administered *Jalauka Avacharana* on Day 1 and Day 15. Trial group patients were administered *Jalauka Avacharana* on Day 1 and Day 15 along with *lepa* of *Jayapal beeja* externally over the bald patch excluding the day one and one day after *Jalauka Avacharana*. The observations noted during the study were tabulated and graphically represented. Paired t test was used for analysis of efficacy of trial drug whereas two sample t test was used to compare efficacies of Control and Trial group. Overall 70% hair growth was seen in trial group in comparison with 15% hair growth in control group. Hence, it can be concluded that local application of *Jayapal beeja lepa* following *Jalauka Avacharana* in *Indralupta* is an effective remedy.

**Key words** - Alopecia, *Indralupta*, *Jayapal beeja*, *Jalauka*

### INTRODUCTION

Hair loss is one of the most common problems faced by people across all age groups. The reason being today's fast paced lifestyle, marred by pollution and stress, increased industrialization and urbanization, contamination of water and air, unhealthy eating habits, other intrinsic factors and genetic cause.<sup>1</sup>In modern medicine loss of hair

is termed as Alopecia. There are many types of Alopecia depending upon the pattern of hair loss. Alopecia areata-a pattern in which there is one or more well defined spots of hair loss on scalp. The etiology of Alopecia areata is idiopathic or for unknown reasons the body's own immune system attacks the hair follicles and disrupts normal hair for-

mation. Currently, the medicines for Alopecia areata are- Topical corticosteroids eg. Flucinolone acetonide cream, Intralesional corticosteroids eg. Hydrocortisone acetate, Minoxidil, Topical immunotherapy eg. DNCB (Dinitrochlorobenzene). These medicines have certain adverse effects like pruritis, skin rash, pain, atrophy etc.<sup>2</sup> Ayurved has described hair problems under *Kshudra roga*, *Shiroroga* as *Khalitya*, *Palitya*, *Indralupta*<sup>3</sup> etc. *Indralupta* is a specific condition characterized by hair loss in form of patches in some scalp areas by the vitiation of *tridosha* and *rakta dhatu*<sup>4</sup>. Acharya Sushruta states the treatment as *Pracchan* followed by *lepa* or *abhyanga*<sup>5</sup>. Efficacy studies have been conducted using *Croton tiglium*, showed better results, but without conducting *Raktamokshana*. So following the principles of management, a study has been designed as *Jayapal beeja lepa*<sup>6</sup> after *Jalauka Avacharan* in *Indralupta*.

## AIM AND OBJECTIVES

**Aim-** To explore the possibility of use of topical application of *Jayapal beeja* following *Jalauka Avacharana* in *Indralupta*

### Objectives

1. Authentication and standardization of trial drug
2. Recording any other effects/adverse effects observed during the clinical trials

## MATERIALS AND METHOD

### Materials

- Materials used were *Jalauka* and *Jayapal beeja*.
- *Jalauka* and *Jayapal beeja* were purchased from Mankarnika Aushadhalaaya, Pune.

- Authentication of *Jayapal beeja* was done from Department of Botany, Pune University, and Pune.
- Standardization of *Jayapal beeja* was done from Department of *Ras Shashtra* and *Bhaishajya Kalpana* of B.V.D.U., College of Ayurved, Pune.

**Method:** It is a Clinical, Randomized, Active controlled trial conducted at Bharati Vidyapeeth Medical Foundation's Ayurved Hospital, Dhankawadi, Katraj, Pune-43.

### Inclusion Criteria

1. Diagnosed patients of *Indralupta* (Alopecia areata) showing clinical findings as oval or round, well circumscribed, bald patch (having diameter less than or equal to 3 cms) with a smooth surface in a diffused distribution.
2. Patients of either sex and age

### Exclusion Criteria

1. Patients having more than one patch of *Indralupta*— as
  - More number of *Jalauka* will be used and
  - Procedure will be exhaustive.
2. Patients having patches in between beard and moustache—as
  - Cases are rare and
  - Uniformity of data will be maintained.
3. Patients having *Khalitya*, Alopecia totalis, Alopecia universalis

### Criteria for Assessment

#### ❖ Subjective Parameter-

- ✓ Area covered by hair follicles [arbitrary % improvement in hair growth].
- Images of the patients were taken before and after the trial and used for Analysis

### Study Design

- ❖ Special Proforma of case paper was designed.

- ❖ Institutional Ethical Committee Clearance was taken prior to commencement of the study.
- ❖ 30 Patients were selected on the basis of clinical diagnosis of *Indralupta* in accordance with inclusion criteria. [Sample size of 30 is taken, as incidence rate is less and study is time bounded]
- ❖ The selected patients have been allotted into two groups at random by lottery method-  
Group A (Control Group) - 15 patients,  
Group B (Trial Group) - 15 patients
- ❖ Informed Consent of patient was taken prior to enrollment for study.

#### Dosage Schedule

- ❖ *Jalauka Avacharana* (for both groups) twice in a month i.e. day 1 and day 15
- ❖ Trial drug administration (for trial group B only)-Application of *Jayapal Beeja* externally (Lepa) to cover entire bald patch and was removed thereafter by wash with normal water.
- ❖ *Lepa* has been applied for four weeks excluding the day and one day after the *Jalauka Avacharana*
- ❖ Follow ups were taken on day 7, 14, 21 and 28 of study period.

#### OBSERVATIONS

##### A) General Observations-

**Table No. 1-Sex wise distribution in both groups**

SEX	GROUP A		GROUP B	
	No. of patients	percentage	No. of patients	percentage
Male	9	60%	8	53%
Female	6	40%	7	47%

**Table No. 2-Age wise distribution in both groups**

AGE	GROUP A		GROUP B	
	No. of patients	percentage	No. of patients	Percentage
0-10	2	13%	1	7%
10-20	5	33%	2	13%
20-30	7	47%	6	40%
30-40	1	7%	6	40%
Grand Total	15	100%	15	100%

##### B) Observations of subjective parameter-

1. **In control group** - It was observed that, in 15 patients of *Indralupta*, on Day 0 there was 0% hair growth i.e. complete

bald patch and on Day 28 i.e. at the end of study, there was on an average 15% hair growth. Thus average 15% improvement in hair growth was seen in the study period of 4 weeks.

#### IMAGES OF WEEKLY FOLLOW-UP IN CONTROL GROUP



**Day 0**



**Day 7**



**Day 15**



**Day 21**



**Day 28**

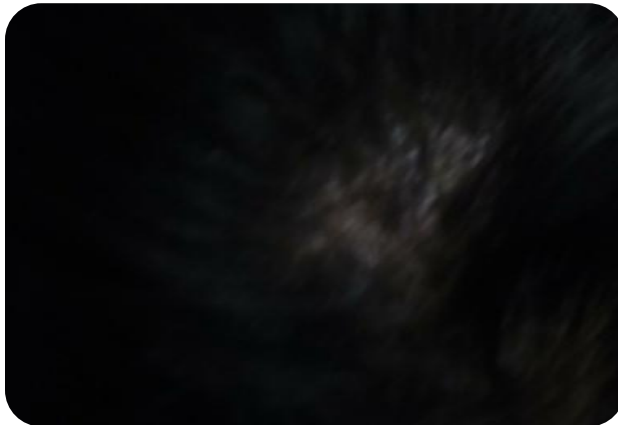
2. **In Trial group** - It was observed that, in 15 patients of *Indralupta*, on Day 0 there was 0% hair growth i.e. complete bald patch and on Day 28 i.e. at the end of study, there was average 70% hair

growth on the bald patch. Thus average 70% improvement in hair growth was seen in the study period of 4 weeks.

**IMAGES OF WEEKLY FOLLOW-UP  
IN TRIAL GROUP**



Day 0



Day 7



Day 15



Day 21



Day 28

3. **Comparison between control and trial group** –In control group the complete bald patch was recovered to 15% hair growth whereas in trial group it was recovered to 60-70% hair growth. Thus it was found that Group B is more effective than Group A on percentage of hair growth in *Indralupta*.

pafter following *Jalauka Avacharan*. On day 2 i.e. on the day of first application of *Jayapal beeja lepa*, it was observed that, almost all patients complained with redness, itching and blister formation over the area of bald patch of *Indralupta*. These side effects were non-serious and sustained up to 2- 3 days without disturbance in daily activities of patients and subsided without medical intervention. The observed side effects on the patch are depicted with the following image-

**Side Effects Observed in the patients of Trial Group–**

In this study, 15 patients in trial group were applied with *Jayapal beeja le-*



**STATISTICAL ANALYSIS**

The Paired t test was used for Intra group i.e analysis between the groups and Two sample t test was used for comparative analysis between the groups.

**1. EFFECT OF GROUP A ON PERCENTAGE OF HAIR GROWTH**

% of hair growth	N	Mean		X	% of relief	SD		Std error		t value	p value
		BT	AT			BT	AT	BT	AT		
<b>Group A</b>	15	0	13	13	100.00%	0	4.14	0	1.07	-12.16	0

**Conclusion-** The P value was < 0.05, hence it can be concluded that the improvement observed in Group A on percentage of hair growth in *Indralupta* was significant.

## 2. EFFECT OF GROUP B ON PERCENTAGE OF HAIR GROWTH

% of hair growth	N	Mean		X	% of relief	SD		Std error		t value	p value
		BT	AT			BT	AT	BT	AT		
<b>Group B</b>	15	0	62	62	100.00%	0	7.973	0	2.058	-30.117	0

**Conclusion-** The P value was < 0.05, hence it can be concluded that the improvement observed in Group B on percentage of hair growth in *Indralupta* was highly significant.

## 3. COMPARISON OF GROUP A AND GROUP B ON PERCENTAGE OF HAIR GROWTH IN INDRALUPTA

% of hair growth	Mean	SD	Std error mean	F	t value	p value
<b>Group A</b>	13	4.14	1.069	5.13	-21.124	0
<b>Group B</b>	62	7.973	2.058			

**Conclusion-** The p value was < 0.05. Hence, there was statistically significant difference in improvement on percentage of hair growth in *Indralupta*. i.e. effect of Group A was not same as effect of Group B in *Indralupta*. Here, mean of Group B is greater than Group A. Hence it was found that Group B i.e. Trial group is more effective than Group A i.e. Control group.

### DISCUSSION

This study has been designed as per the Ayurvedic principles of management of *Indralupta* i.e. *Raktamokshan* and then *lepa* application. Some pilot experiments had to be carried out to resolve the problems encountered while designing the study. *Raktamokshan* is stated as a modality in the treatment of *Indralupta* either by *Siravedh*

or *Prachhan*. *Siravedh* is having possible risk of excessive blood loss and *Prachhan* is painful and later may develop sepsis like condition. So instead of *siravedh* and *Prachhan*, *Jalauka Avacharan* has been preferred. As it is *shodhan karma*, after that *shaman chikitsa* has to be commenced i.e. *lepa* application one day after *Jalauka Avacharan*. *Shodhan* has been advised to conduct repeatedly in skin manifestations for *sanchit dosha nirharan* (removal of cumulated *dosha* locally). Considering the feasibility, in the study period of 4 weeks, *Jalauka Avacharan* was planned to conduct fortnightly in both groups.

**During Observations :** In trial group, out of 15, about 75% patients of *Indralupta* had shown side effects as redness, itching, blister

formation, on the day of first application of *Jayapal beeja lepa* on bald patch. Though the observed side effects were mild, non-serious and subsided within 2-3 days after discontinuation of the *lepa* without recurrence. In some cases coconut oil, *ghrit* was applied at the site to reduce severity of these side effects. Medical intervention like anti-histamines, steroids etc was not needed in any of these cases. None of patients were dropped out from the study. The summary of observations has been discussed as below.

**1. In Control Group-**The 15 patients of control group were applied with only *Jalauka Avacharan* fortnightly, average 10-20% hair growth was observed up to the study duration of 28 days.

**2. In Trial Group-**The 15 patients of trial group were applied with *Jayapal beeja lepa* following *Jalauka Avacharan*, average 60-70% hair growth was observed up to the study duration of 28 days. The arbitrary % of hair growth on the patch of *Indralupta* measured visually and from the images taken during the entire study.

- Intra-group analysis: Paired T Test was used for Intra-group analysis of control and trial.

On 5 % level of significance, the improvement in hair growth observed in control group was statistically significant. As on day 0, there were no hair on the patch i.e. complete bald patch of *Indralupta* and at the end of 28 days, up to 20% hair growth was observed. On 5% level of significance, the improvement in hair growth observed in trial group was statistically highly significant. As on day 0, there were no hair on the patch i.e. complete bald patch of *Indralupta* and at the end of 28 days, up to 70% hair growth was observed.

#### A. Inter-group analysis

Two sample T test was used for Inter-group statistical analysis i.e. comparison of arbitrary % of hair growth in control and trial group. On 5% level of significance, the p value was  $< 0.05$ . Hence there was statistically significant difference in both groups but as mean of Group B is more than that of Group A. Trial group is more effective than control. This can be concluded as percentage (%) hair growth was more in trial than control group. In the study period of 28 days, 100% hair growth was not seen in trial group. In a single case, the study was extended up to 3 months without further medical intervention. The 100% hair growth was observed at the end. Thus an inference can be drawn that normal hair cycle has been commenced with trial regimen and completed in 1 month but not in the entire area of bald patch and it may require 3 months duration. The efficacy of trial drug regimen i.e. *Jayapal beeja lepa* following *Jalauka Avacharan* may be discussed with these points:

- *Jalauka Avacharan* (a *shodhan* modality) removes *dushit Rakta* with *Tridosha* from the site of bald patch, which is causing the *avarodhajanya samprapti* of *Indralupta*.
- *Jayapal* is strong irritant-vesicating poison, thus causing irritation locally. Its acceleration of intracellular activities may be correlated with stimulation for restart of normal hair cycle, resulting in hair regrowth.
- Thus, above combined therapy has proven effective in treatment of *Indralupta*.

#### CONCLUSION



The efficacy of *Jayapal Beeja lepa* following *Jalauka Avacharan* is said to be proven, because of, significant hair growth on the patch of *Indralupta*, Non-serious, mild and minimal side effects subsiding without medical intervention. The present study confirms effectiveness of *Jayapal Beeja lepa* following *Jalauka Avacharan* in *Indralupta*.

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